

# OVERALL ENVELOPE METHOD

(Part 1 of 5)

ENV-2

PROJECT NAME

DATE

## WINDOW AREA TEST

A. DISPLAY PERIMETER	<input type="text"/>	FT × 6 =	<input type="text"/>	SF DISPLAY AREA
B. GROSS EXTERIOR WALL AREA	<input type="text"/>	SF × 0.40 =	<input type="text"/>	SF 40% AREA
C. GROSS EXTERIOR WALL AREA	<input type="text"/>	SF × 0.10 =	<input type="text"/>	SF MINIMUM STANDARD AREA
D. ENTER LARGER OF A OR B			<input type="text"/>	SF MAXIMUM STANDARD AREA
E. ENTER PROPOSED WINDOW AREA			<input type="text"/>	SF PROPOSED AREA

IF E IS GREATER THAN D OR LESS THAN C, PROCEED TO THE NEXT CALCULATION FOR WINDOW AREA ADJUSTMENT. IF NOT, GO TO PART 2 OF 5.

1. IF E IS GREATER THAN D:

MAXIMUM STANDARD AREA		PROPOSED WINDOW AREA		WINDOW ADJUSTMENT FACTOR
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

GO TO PART 5 TO CALCULATE ADJUSTED AREA

2. IF LESS THAN C:

MAXIMUM STANDARD AREA		PROPOSED WINDOW AREA (IF E = 0 ENTER 1)		WINDOW ADJUSTMENT FACTOR
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

GO TO PART 5 TO CALCULATE ADJUSTED AREA

## SKYLIGHT AREA TEST

ATRIUM HEIGHT	<input type="text"/>	FT				
	↓	OR	↓			
	IF ≤ 55 FT	IF > 55 FT				
	→	0.10	×	<input type="text"/>	=	<input type="text"/>
	→	0.05	×	<input type="text"/>	=	<input type="text"/>
		STANDARD %		GROSS ROOF AREA		STANDARD SKYLIGHT AREA
						<input type="text"/>
						PROPOSED SKYLIGHT AREA

IF THE PROPOSED SKYLIGHT AREA IS GREATER THAN THE STANDARD SKYLIGHT AREA, PROCEED TO THE NEXT CALCULATION FOR THE SKYLIGHT AREA ADJUSTMENT. IF NOT, GO TO PART 2 OF 5.

1. IF PROPOSED SKYLIGHT AREA ≥ STANDARD SKYLIGHT AREA:

STANDARD SKYLIGHT AREA		PROPOSED SKYLIGHT AREA (IF E = 0 ENTER 1)		SKYLIGHT ADJUSTMENT FACTOR
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

GO TO PART 5 TO CALCULATE ADJUSTED AREAS

# OVERALL ENVELOPE METHOD

(Part 2 of 5)

ENV-2

PROJECT NAME

DATE

## OVERALL HEAT LOSS

A		B	C	D	E		F	G	H	
		PROPOSED				STANDARD				
ASSEMBLY NAME (e.g. Wall-1, Floor-1)		AREA	HEAT CAPACITY	U-VALUE	TABLE VALUES?		UA (B × D)	AREA* (Adjusted)	U-VALUE	UA (F × G)
					Y	N				
WALLS										
ROOFS/CEILINGS										
FLOORS/SOFFITS										
WINDOWS		# OF PANES		N/A						
				N/A						
				N/A						
				N/A						
				N/A						
				N/A						
SKYLIGHTS		# OF PANES		N/A						
				N/A						
				N/A						
				N/A						
				N/A						
				N/A						

\* If Window and/or Skylight Area Adjustment is Required, use adjusted areas from part 5 of 5.

TOTAL	← Column E shall be no greater than column H →	TOTAL
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# OVERALL ENVELOPE METHOD

(Part 3 of 5)

ENV-2

PROJECT NAME

DATE

## OVERALL HEAT GAIN FROM CONDUCTION

		A	B	C	D	E	F	G	H	I	J	
		PROPOSED						STANDARD				
ASSEMBLY NAME (e.g. Wall-1, Floor-1)		AREA	TEMP. FACTOR	HEAT CAPACITY	U-VALUE	TABLE VALUES?		HEAT GAIN (B x C x E)	AREA* (Adjusted)	U-VALUE	TEMP. FACTOR	HEAT GAIN (G x H x I)
						Y	N					
WALLS						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
ROOFS/CEILINGS						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
FLOORS/SOFFITS						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
						<input type="checkbox"/>	<input type="checkbox"/>					
WINDOWS				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
SKYLIGHTS				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					
				N/A		<input type="checkbox"/>	<input type="checkbox"/>					

\* If Window and/or Skylight Area Adjustment is Required, use adjusted areas from part 5 of 5.

SUBTOTAL

SUBTOTAL

# OVERALL ENVELOPE METHOD

(Part 4 of 5)

ENV-2

PROJECT NAME

DATE

## OVERALL HEAT GAIN FROM RADIATION

	A	B	C	D	E	F	G	H	I	J	K	L	M	
	WINDOW/SKYLIGHT NAME (e.g Window-1, Sky-1)	WEIGHTING FACTOR	PROPOSED							STANDARD				
			AREA	SOLAR FACTOR	SHGC	OVERHANG				HEAT GAIN (BxCx DxExH)	AREA (Adjusted)*	RSHG or SHGC**	SOLAR FACTOR	HEAT GAIN (BxJxKxL)
						H	V	H/V	OHF					
NORTH														
EAST														
SOUTH														
WEST														
SKYLIGHTS						N/A	N/A	N/A	N/A					
						N/A	N/A	N/A	N/A					
						N/A	N/A	N/A	N/A					
						N/A	N/A	N/A	N/A					
						N/A	N/A	N/A	N/A					
Part 4 Subtotal										Part 4 Subtotal				
Part 3 Subtotal										Part 3 Subtotal				
TOTAL										TOTAL				

\* If Window and/or Skylight Area Adjustment is Required, use adjusted areas from part 5 of 5.

\*\* Only SHGC is used for Skylights

Column I must be less than column M

# OVERALL ENVELOPE METHOD

(Part 5 of 5)

ENV-2

PROJECT NAME

DATE

## WINDOW AREA ADJUSTMENT CALCULATIONS

☐ CHECK IF NOT APPLICABLE (see Part 1 of 5)

A					B	C	D	E	F	G
WALL NAME (e.g. Wall-1, Wall-2)	ORIENTATION				GROSS AREA	DOOR AREA	WINDOW AREA	WINDOW ADJUSTMENT FACTOR (From Part 1)	ADJUSTED WINDOW AREA (D×E)	ADJUSTED WALL AREA B-(F+C)
	N	E	S	W						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

TOTALS:

## SKYLIGHT AREA ADJUSTMENT CALCULATIONS

☐ CHECK IF NOT APPLICABLE (see Part 1 of 5)

A	B	C	D	E	F
ROOF NAME (e.g. Roof-1, Roof-2)	GROSS AREA	SKYLIGHT AREA	SKYLIGHT ADJUSTMENT FACTOR (From Part 1)	ADJUSTED SKYLIGHT AREA (C×D)	ADJUSTED ROOF AREA (B - E)

TOTALS: